

NOTES ON TEXAS CERAMBYCIDAE (COLEOPTERA)

ROBERT H. TURNBOW, JR.¹ AND JAMES E. WAPPES

School of Forest Resources, University of Georgia, Athens, GA 30602
and 12110 Acorn Oak Pl., The Woodlands, TX 77380, respectively

ABSTRACT

Previously unrecorded larval hosts, seasonal occurrences, distributional records, and other ecological data are presented for 28 species of Texas Cerambycidae. *Aneflus prolixus insoletus* Chemsak & Linsley is recorded from the United States for the first time. *Parandra b. brunnea* (Fabricius), *Methia pusilla* (Newman), and *Psyrassa pertenuis* (Casey) are recorded from Texas for the first time. First larval hosts are reported for *Methia constricticollis* Schaeffer, *Piezocera serraticollis* Linell, and *Catopterion amoena* Hamilton.

Annotated records by Townsend (1902), Schaeffer (1908), Linsley and Martin (1933), Vogt (1949), and Hovore and Giesbert (1976) have added substantially to our knowledge of Texas cerambycids, but much is yet to be learned regarding larval hosts, adult habits, seasonal occurrences, and geographic distributions. Observations and rearing data reported here for 1974-78 represent significant new distributional records, seasonal occurrences, and larval hosts. Most rearings were done in garbage cans, some in cardboard boxes; all were done indoors. Host materials were sprayed regularly with water to prevent desiccation. Air lines attached to the rearing cans permitted air circulation and prevented excessive fungal growth.

Specimens collected during these studies are in the collections of the authors (RHT and JEW) and the Texas State Collection (Arthropods), Austin.

PARANDRINAE

Parandra b. brunnea (Fabricius). This subspecies has been recorded from throughout eastern North America, but not from Texas (Linsley 1962a). **New state record:** We have 2 specimens captured at light in June, 1977 at The Woodlands (*Montgomery Co.*).

CERAMBYCINAE

Methia constricticollis Schaeffer. This southern Texas species has not previously been associated with any host plant species. **New host record:** We reared 2 specimens in April and May, 1977 from twigs of recently cut *Celtis lindheimeri* Engelm. (paloblanco) collected in September, 1976 at Bentsen-Rio Grande Valley State Park (Bentsen-RGVSP) (*Hidalgo Co.*).

Methia pusilla (Newman). Although the recorded host, *Taxodium distichum* (L.) (baldcypress), occurs locally throughout eastern and Gulf-coast Texas, *M. pusilla* has not previously been recorded from Texas. **New state record:** Numerous specimens were collected at UV light at The Woodlands from late June through early September, 1977 (JEW). Flights were always crepuscular. We were unable to find any baldcypress in the vicinity, hence *M. pusilla* may be using an alternate host for larval development.

¹Mailing address: Department of Entomology, University of Georgia, Athens, Ga. 30602.

Eburia mutica LeConte. This species has previously been recorded from *Citrus* (Dean 1953) and *Celtis* (Hovore *et al.* 1978). **New host records:** Specimens were reared from limb and trunk sections of cut *Prosopis glandulosa* Torr. (mesquite) collected in Bentsen-RGVSP in June, 1975 (RHT). We also reared one specimen from limbs of dead *Pithecellobium pallens* (Benth.) Standl. (tenaza) collected in Lake Corpus Christi State Park (*San Patricio Co.*) in September, 1976. Specimens emerged from April through July of succeeding seasons.

Taranomis b. bivittata (Dupont). This subspecies has been reared from fig (Townsend 1902), *Acacia* (Linsley 1940), and *Prosopis* (Rogers 1977). Duffy described the larva from a specimen taken from "cosabe". **New host record:** In March, 1977 we reared one male from cut limbs of *Ulmus crassifolia* Nutt. (cedar elm) collected in Bentsen-RGVSP in September, 1976.

Gnaphalodes trachyderoides Thomson. This species breeds in a variety of legumes (Linsley 1962b), *Celtis* (Hovore and Giesbert 1976), and *Citrus* (Manley and French 1976). **New host record:** We reared numerous specimens in February and March, 1978 from the larger limbs of an *Ulmus crassifolia* cut in Bentsen-RGVSP in 1977.

Psyrassa pertenuis (Casey). Although this species has been recorded from adjacent areas of Louisiana, no collections have been reported from Texas. **New state record:** Specimens of this species were collected at UV light at The Woodlands in June, 1977 (JEW). *P. pertenuis* is known to use *Carya* spp. as hosts (Linsley 1963), several of which are found throughout eastern Texas.

Psyrassa sallaei Bates. This elaphidionine was inadvertently omitted from the faunal list of U.S. cerambycids in the most recent checklist of the Cerambycidae of North America (Chemsak and Linsley 1976). Vogt (1949), however, reported collecting a specimen of this species on soapberry (*Sapindus drummondi* Hook & Arn.) in Hidalgo Co. We beat 2 males from the foliage and flowers of *Cordia boissieri* A. DC. (anacahuita) 15 miles east of Rio Grande City (*Starr Co.*) in September, 1976.

Stenosphenus lugens LeConte. In the U.S. this species is restricted to areas of the lower Rio Grande valley of Texas where it has been collected on a variety of flowering plants (Vogt 1949). Vogt reported rearing specimens from *Oncideres*-pruned branches of *Leucaena pulverulenta* (Schlecht.) Benth. (tepehuaje) and Linsley (1963) from *Acacia farnesiana* (L.) Willd. (huisache). **New host record:** We reared several specimens from mid-May through mid-June, 1977 from cut limbs of *Celtis lindheimeri* collected in Bentsen-RGVSP in September 1976.

Aneflus prolixus insoletus Chemsak & Linsley. Three subspecies of *A. prolixus* have been recognized (Chemsak and Linsley 1963). The nominate subspecies is apparently restricted to Baja California. The subspecies *A. p. fisheri* Knull is known from southeastern Arizona to Durango, Mexico along the western side of the continental divide. The subspecies *A. p. insoletus* has previously been recorded only from Mexico, with collection localities ranging across the northern states of Tamaulipas, Coahuila, Durango, and Chihuahua. All of these localities are east of the continental divide. **New U.S. record:** We found *A. p. insoletus* moderately abundant at Falcon State Park and Falcon Heights (*Starr Co.*) and Lake Corpus Christi State Park in late September, 1976. Specimens were taken at light at all 3 localities and on slash piles at the latter. *A. p. insoletus* differs from *A. p. fisheri* by the denser, finer pubescence; longer antennae, which equal or exceed the body in length; and smaller antennal spines.

Aneflomorpha seminuda Casey. Little is known of the habits of this uncommon species. The holotype bears only the information "Tex./USNM Type No. 35970/*seminuda*." Linsley (1963) indicated its range was confined to western Texas. A single specimen was taken at UV light at Santa Ana Wildlife Refuge (*Hidalgo Co.*) in April, 1974 (JEW). This extends the range of the species considerably south and east of known localities.

Anelaphus debilis (LeConte). Hovore and Giesbert (1976) reported this species as breeding in dead mesquite. **New host records:** We reared numerous specimens from dead, standing *Baccharis angustifolia* Michx. taken at the Welder Wildlife Refuge, 7 miles north of Sinton (*San Patricio Co.*) and cut *Pithecellobium pallens* collected at Lake Corpus Christi State Park. Both collections were made in September, 1976. Beetles emerged from late December, 1976 through mid-March, 1977. F. T. Hovore (pers. comm.) has reared the species from *Celtis* collected near Seguin (*Gonzales Co.*).

Anelaphus m. moestus (LeConte). Linsley (1963) listed the host of this species as *Juglans nigra*, apparently based upon Craighead's (1923) larval description. Subsequently Hovore and Giesbert (1976) reported beating and rearing specimens from dead oak (*Quercus* sp.). **New host record:** A single specimen was reared from cut

limbs of *Celtis lindheimeri* collected in September, 1976 in Bentsen-RGVSP (RHT). The specimen emerged in June, 1977.

Anelaphus subinermis Linsley. This uncommon species is known only from western Texas and adjacent areas of northern Mexico where it has been recorded as breeding in huisache (Linsley 1963). **New host record:** We collected a larva in a dead floral stalk of a *Dasyliirion* sp. (sotol) 19 miles northeast of Dryden (*Terrell Co.*) in October, 1976. The larval gallery extended upward from the base of the floral stalk for a distance of some 30 cm. and was packed with coarse boring frass. The pupal chamber, which had already been formed at the time of collection, consisted of some 10 cm. of cleared gallery tightly plugged at both extremities. Pupation occurred early in May, 1977 and transformation to the adult took place later in that month. Similar galleries from which adults had previously emerged were noted in other floral stalks collected at the same locality. In all of these, the adult had emerged through an elliptical hole atop the pupal chamber.

Piezocera serraticollis Linell. In the U.S. this unusual species is known only from southern Texas. Hovore *et al.* (1978) reported beating adults from decadent branches of *Celtis spinosa* Spreng. var. *pallida* Torr., *C. laevigata* Willd., and *Pithecellobium flexicaule* and from blossoms of *Leucaena pulverulenta*. **New host record:** We reared one specimen from small lateral branches of *Celtis lindheimeri* collected in Bentsen-RGVSP in September, 1976. The specimen emerged in late May, 1977, corresponding to the flight period in the field.

Neocompsa mexicana (Thomson). Linsley (1963) listed *Acacia farnesiana* and *Pithecellobium flexicaule* as host plants for this species. **New host record:** We reared 2 specimens in February, 1978 from limbs of dead *Celtis laevigata* collected in Bentsen-RGVSP in October, 1977.

Obrium mozinnae Linell. This distinctive Texas species has been beaten from *Mozinna* (= *Jathropa*) *spatulata* (O.D.) and from flowers of *Acacia* and *Condalia obovata* Hook (Linsley 1963). Hovore *et al.* (1978) reported beating and rearing specimens from branches of tepehuaje which had been girdled by *Oncideres pustulatus* Lec. **New host record:** We reared *O. mozinnae* in series from February through May, 1977 from cut limbs of *Prosopis glandulosa* found in Santa Ana Wildlife Refuge in September, 1976. This record suggests that *O. mozinnae* may be able to use a variety of leguminous trees and shrubs for larval development.

Neoclytus acuminatus hesperus Linsley. The nominate form of this species occurs throughout eastern North America and has been reared from a wide variety of woody plants (Linsley 1964). The subspecies found in southern Texas, *N. a. hesperus*, has been reared only from *Quercus* and *Pithecellobium pallens* (Linsley 1964) and from *Citrus* (Manley and French 1976). **New host records:** We reared specimens from dead standing *Baccharis angustifolia* found at Welder Wildlife Refuge and from *Prosopis glandulosa* collected in Bentsen-RGVSP.

Neoclytus augusti Chevrolat. Manley and French (1977) reported rearing this species from *Citrus*. **New host records:** We reared *N. augusti* from *Prosopis glandulosa*, *Ulmus crassifolia*, and *Celtis lindheimeri*. Wood collections were made in Bentsen-RGVSP in June, 1975 and September, 1976; emergence dates ranged from February through October of succeeding years.

Neoclytus mucronatus vogti Linsley. In the original description Linsley (1957) indicated that this subspecies appears to be associated with *Celtis*, *Ulmus crassifolia*, and *Parkinsonia*. **New host record:** A large series of *N. m. vogti* was reared from August, 1975 through April, 1976 from trunk sections of decadent mesquite (*Prosopis glandulosa*) collected in Bentsen-RGVSP in June, 1975 (RHT).

Rhopalophora angustata Schaeffer. Vogt (1949) reported collecting adults of this longhorn on flowers of *Monarda* and *Baccharis neglecta* and dead branches of *Celtis* and *Pithecellobium*. The *Citrus* record of Manley and French (1976) is the only published larval host. **New host records:** We reared numerous specimens from dead branches of *Pithecellobium pallens* collected in Lake Corpus Christi State Park and from dead twigs of *Eysenhardtia texana* Scheele (Texas kidneywood) found 5.3 miles southeast of Rio Grande City (*Starr Co.*). Specimens emerged from February through May, 1977 from collections made in September, 1976.

Rhopalophora rugicollis (LeConte). Tyson (1970) recorded this species as breeding in the small limbs of a shrub belonging to the Ulmaceae, probably a *Celtis* sp. Linsley and Martin (1933) reported collecting adults on *Salix*. **New host record:** We reared numerous specimens from dead branches of *Pithecellobium pallens* collected at Lake Corpus Christi State Park. Emergence dates ranged from late December, 1976 through March, 1977.

Ancylocera bicolor (Olivier). Adults of this peculiar species have been reared from *Carya* and *Quercus* (Fattig 1947), and in the lower Rio Grande valley specimens have been collected on huisache, tepehuaje, and *Baccharis neglecta* (Vogt 1949). **New host record:** We reared *A. bicolor* from February through June, 1977 from small limbs of cut *Celtis lindheimeri* collected in Bentsen-RGVSP in September, 1976.

LAMIINAE

Astyliidius parvus (LeConte). The larval hosts attributed to this species by Craighead (1923) and Champlain *et al.* (1925) can undoubtedly be referred to *A. versutus* Casey. Townsend (1902), however, reported rearing specimens of *A. parvus* from fig twigs and Linsley and Martin (1933) reported taking a small series on *Celtis*. **New host record:** We reared numerous specimens from March through June, 1977 from dead limbs of *Pithecellobium pallens* collected in Lake Corpus Christi State Park in September, 1976.

Sternidius wiltii (Horn). Previous records of this uncommonly collected long-horn (Linsley and Martin 1933; Vogt 1949; Dillon 1956) suggest that adults are active in late spring or early summer. We collected several specimens at lights in Falcon State Park and Falcon Heights in late September, 1976. F. T. Hovore (pers. comm.) has beaten adults from huisache which had been girdled by *Oncideres pustulatus* at Welder Wildlife Refuge in October, 1975.

Lepturges angulatus canus Casey. Adults probably assignable to this subspecies were reported by Townsend (1902) as having been reared from dead fig branches and collected on dead branches of guava, and by Vogt (1949) as having been collected under bark of dead hackberry and beaten from huisache and tepehuaje. **New host records:** We reared *L. a. canus* from dead limbs of *Pithecellobium pallens* and *Celtis lindheimeri* collected in Lake Corpus Christi State Park and Bentsen-RGVSP, respectively. Adults emerged from April through July, 1977 from woods collected in September, 1976.

Dorcasta cinerea (Horn). This interesting species has been variously reported as collected on sunflower and small annual plants (Wickham 1898; Townsend 1902; Linsley and Martin 1933; Vogt 1949). Apparently no larval host is known. We collected a female clinging to a recently girdled huisache twig in Bentsen-RGVSP in October, 1977.

Cathopteron amoena Hamilton. Linsley and Martin (1933) reported taking this diminutive species on *Celtis*. **New host record:** We reared it from *Celtis lindheimeri* collected in Bentsen-RGVSP. We also collected an adult by beating *Celtis pallida* Torr. (spiny hackberry) in the Sabal Palm Grove Sanctuary near Southmost (Cameron Co.) in October, 1977. This record extends the known adult flight period, as all other reported specimens have been taken in late spring or early summer.

ACKNOWLEDGEMENTS

We thank the following individuals and organizations for help and courtesies extended during our studies: D. Riskind (Texas Department of Parks), for permission to collect in state parks; Eric Bolen (Welder Wildlife Foundation), for permission to collect within the foundation's refuge and for accommodations during our stay; John Anderson and Ernest Ortiz (National Audubon Society), for permission to collect in the Sabal Palm Grove Sanctuary and assistance during our visits; R. Rauch, for permission to collect in the Santa Ana Wildlife Refuge; J. A. Chemsak (University of California, Berkeley), for verifying certain of our determinations and other helpful suggestions; T. J. Spilman (Systematic Entomology Laboratory, USDA), for checking the type of *Aneflomorpha seminuda* Casey; and F. T. Hovore (Placerita Canyon Nature Center) and R. L. Penrose (Oregon Department of Agriculture), for advice, assistance, generosity with specimen records and literature, and reviews of the manuscript. Financial support was provided in part by the Georgia Forest Research Council and McIntire-Stennis funds.

LITERATURE CITED

- CHAMPLAIN, A. B., H. B. KIRK, AND J. N. KNULL. 1925. Notes on Cerambycidae. Ent. News 36:105-109; 139-142.
- CHEMSAK, J. A., AND E. G. LINSLEY. 1963. Synopsis of the known Mexican species of *Aneflus* (Coleoptera:Cerambycidae). Bull. Brooklyn Ent. Soc. 63:80-96.
- CHEMSAK, J. A., AND E. G. LINSLEY. 1974. Checklist of the beetles of Canada, United States, Mexico, Central America and the West Indies. Vol. 1, Part 6. The longhorn beetles and the family Disteniidae. (Red Version). Biol. Res. Inst. Amer. pp. 1-224.
- CRAIGHEAD, F. C. 1923. North American cerambycid larvae. Can. Dept. Agr., Bull. (n.s.) 27:1-239.
- DEAN, H. A. 1953. Long-horned beetles that attack citrus in the lower Rio Grande valley of Texas. J. Econ. Ent. 36:174.
- DILLON, L. S. 1956. The nearctic components of the tribe Acanthocinini (Coleoptera:Cerambycidae). Part II. Ann. Ent. Soc. Amer. 49:207-235.
- DUFFY, E. A. J. 1960. Monograph of immature stages of neotropical timber beetles. British Mus. (Nat. Hist.), London, 327 pp.
- FATTIG, P. W. 1947. The Cerambycidae or long-horned beetles of Georgia. Emory Univ. Mus. Bull. 5:1-48.
- HOVORE, F. T., AND E. F. GIESBERT. 1976. Notes on the ecology and distribution of western Cerambycidae (Coleoptera). Coleop. Bull. 30:349-360.
- HOVORE, F. T., R. L. PENROSE, AND E. F. GIESBERT. 1978. Notes on North American Cerambycidae (Coleoptera). Ent. News (in press).
- LINSLEY, E. G. 1940. Notes on *Oncideres* twig girdlers. J. Econ. Ent. 33:561-563.
- LINSLEY, E. G. 1957. New subspecies of Cerambycidae mostly from southwestern United States. Coleop. Bull. 11:33-36.
- LINSLEY, E. G. 1962a. Cerambycidae of North America, pt. II, taxonomy and classification of the Parandrinae, Prioninae, Spondylinae and Aseminae. Univ. Calif. Publ. Ent. 19:1-102.
- LINSLEY, E. G. 1962b. Cerambycidae of North America, pt. III, taxonomy and classification of the subfamily Cerambycinae, tribes Opsimini through Megaderini. Univ. Calif. Publ. Ent. 20:1-188.
- LINSLEY, E. G. 1963. Cerambycidae of North America, pt. IV, taxonomy and classification of the subfamily Cerambycinae, tribes Elaphidionini through Rhinotragini. Univ. Calif. Publ. Ent. 21:1-165.
- LINSLEY, E. G. 1964. Cerambycidae of North America, pt. V, taxonomy and classification of the subfamily Cerambycinae, tribes Callichromini through Ancylocerini. Univ. Calif. Publ. Ent. 22:1-197.
- LINSLEY, E. G., AND J. O. MARTIN. 1933. Notes on some longicorns from subtropical Texas (Coleop.:Cerambycidae). Ent. News 44:178-183.
- MANLEY, G. V., AND J. V. FRENCH. 1976. Wood boring beetles inhabiting citrus in the lower Rio Grande valley of Texas: 1. Cerambycidae. J. Rio Grande Valley Hortic. Soc. 30:45-53.
- MANLEY, G. V., AND J. V. FRENCH. 1977. A *Neoclytus* new to the United States (Coleoptera:Cerambycidae). Ent. News 88:39-40.
- ROGERS, C. E. 1977. Bionomics of *Oncideres cingulata* (Coleoptera:Cerambycidae) on mesquite. J. Kans. Ent. Soc. 50:222-228.
- SCHAEFFER, C. 1908. List of the longicorn Coleoptera collected on the museum expeditions to Brownsville, Texas, and the Huachuca Mts., Arizona, with descriptions of new genera and species and notes on known species. Brooklyn Inst. Mus. Sci. Bull. 1:325-352.

- TOWNSEND, C. H. T. 1902. Contribution to a knowledge of the Coleopterous fauna of the lower Rio Grande valley in Texas and Tamaulipas, with biological notes and special reference to geographical distribution. *Trans. Texas Acad. Sci.* 5:49-101.
- TYSON, W. H. 1970. Notes on the host, larval habits, and parasites of two Texas cerambycids. *Proc. Ent. Soc. Wash.* 72:93.
- VOGT, G. B. 1949. Notes on Cerambycidae from the lower Rio Grande valley, Texas. *Pan-Pac. Ent.* 25:137-144; 175-184.
- WICKHAM, H. F. 1898. Recollections of old collecting grounds, pt. III, the lower Rio Grande valley (cont.). *Ent. News* 9:39-41.



TECHNIQUES

A new approach to measuring beetles was recently developed by me, based on observations of techniques used by mammalogists (craniometer). Using a Brinkmann two-axis stage as a specimen transport device, I had Spaulding Instruments of Pasadena, California, develop a potentiometer coupler to a Brinkmann-adapted micrometer head. The potentiometer is wired to a Spaulding Digital read-out box (x and y axis). The microscope (any will do) has an ocular cross-hair, and is mounted on a botanical scope swing-arm to allow room for the stage. The cross-hair aligns point A on the specimen, the digital read-out is "zeroed," the transport of the specimen to point B is viewed through the scope, and cross-hair alignment is set at B. Meanwhile, the potentiometer records electronically the movement of the micrometer head and relays the impulses to the digital device, recording the movement to 1/1000 of a millimeter. The reading can be taken by hand, keyed into a calculator, or transmitted to a computer via hook-up to an office terminal. The advantages of this system are repeatable results by multiple users (no ocular micrometer parallax problems), speed of measuring, resolution of measurements, and direct hook-up to a computer for immediate analysis of measurements.

—T. L. Erwin

